



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| | | | | |
|--|-------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/541,628 | 07/07/2005 | Tomo Kishigami | 1190-0609PUS1 | 8286 |
| 2292 7590 06/18/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | | |
| EXAMINER | | | | |
| YODICEKAS, ANEETA | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2627 | | | | |
| NOTIFICATION DATE | | DELIVERY MODE | | |
| 06/18/2010 | | ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/541,628

Applicant(s)

KISHIGAMI ET AL.

Examiner

Aneeta Yodichkas

Art Unit

2627

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10, 11, 13-16, 20-23, 28, 29 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 5-9, 12, 17-19, 24-27 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 13-16, 20-23 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 2005/0088940 A1 to *Toda et al.*

As to **claim 1**, *Toda* discloses an optical recording method comprising the steps of: reading recommended write strategy parameters and recommended asymmetry value from an optical recording medium on which the recommended write strategy parameters and recommended asymmetry value have been recorded (Fig. 9, paragraph 0046 and 0049, where the recommended write strategy is read in step (102) and the recommended asymmetry value is calculated based on the write strategy in step (106)); determining a write strategy and an asymmetry value to be used in recording, based on the recommended write strategy parameters and the recommended asymmetry value and characteristics of the optical system of the optical pickup of the optical recording device used in recording, and a predetermined calculation formula (Fig. 9, paragraphs 0018 and 0046-0051, where in step (102), the control data, which includes the recording condition data, which includes the recording power and the asymmetry data, is retrieved

from the recording medium (5), which are the recommended write strategy and the recommended asymmetry value, and in steps (104-107), the asymmetry and write strategy are changed based on the characteristics of the optical system of the optical pickup until the optimum recording condition is achieved based on a calculation performed by the controller (19)); determining an optimal recording power based upon the recommended write strategy parameters and the asymmetry value thus determined (Fig. 9, paragraphs 0046-0050, where the recording power is determined in steps (104-107)); and writing to the optical recording medium by use of the optical recording device, using the write strategy and the optimal recording power thus determined (Fig. 9, paragraphs 0046-0050, where in steps (104-107), the optimum recording power is determined and writing to the medium is performed in step (104)), wherein the characteristics of the optical system of the optical pickup includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device (Fig. 1, paragraph 0017, where the optical pickup includes a laser (1) which sends light with a wavelength to the optical recording device (5), with an objective lens (4) which has a numerical aperture).

As to **claim 2**, Toda discloses the optical recording method, wherein: the write strategy is a multiple-pulse type of write strategy (Fig. 1, paragraph 0018, where the recording condition, or write strategy, is multi-pulse as it has changes in amplitude of the power); and the step of determining determines a leading pulse width of the write strategy for recording each mark, based on a ratio of a recommended leading pulse width parameter of the write strategy for recording each mark included in the

recommended write strategy parameters with respect to the square of the recommended leading pulse width parameter of the write strategy for recording the shortest mark included in the recommended write strategy parameters (Fig. 9, paragraphs 0049-0050, where the pulse widths, which are part of the recording condition, is determined in steps (107-108)).

As to **claim 3**, *Toda* discloses the optical recording method, wherein said step of determining is carried out by a computation using a formula predetermined for the optical recording device used in recording (Fig. 7-9, paragraph 0044, where a formula is used compute the write-strategy).

As to **claim 4**, *Toda* discloses the optical recording method, wherein in regard to the write strategy for recording each mark of the write strategy, the leading pulse width that minimizes reproducing jitter is determined experimentally, a formula is generated such that the experimentally determined leading pulse width is the result of a calculation or a value approximating the result of the calculation, and the generated formula is used in said step of determining (Fig. 5 and 6, paragraphs 0037-0038, where the graphs show a relationship between jitter and power, which is determined experimentally).

As to **claim 13**, *Toda* discloses limitations similar to those disclosed in claim 1 above.

As to **claims 14, 21 and 32**, *Toda* discloses limitations similar to those disclosed in claim 2 above.

As to **claims 15, 22 and 33**, *Toda* discloses limitations similar to those disclosed in claim 3 above.

As to **claims 16 and 23**, *Toda* discloses limitations similar to those disclosed in claim 4 above.

As to **claim 20**, *Toda* discloses an optical recording method comprising the steps of: reading recommended write strategy parameters from an optical recording medium on which the recommended write strategy parameters including recommended pulse width value have been recorded (Fig. 9, paragraph 0046, where the recording condition, or write strategy, is read in step (102)); determining a write strategy including leading pulse width parameter to be used in recording, based on the recommended pulse width value and characteristics of the optical system of the optical pickup of the optical recording device used in recording (Fig. 9, paragraphs 0018 and 0046-0051, where in step (102), the control data, which includes the recording condition data, which includes the recording power, is retrieved from the recording medium (5), which is the recommended write strategy including pulse width parameters, and in steps (104-107), the write strategy is changed based on the characteristics of the optical system of the optical pickup until the optimum recording condition is achieved); and writing to the optical recording medium by use of the optical recording device, using the write strategy thus determined (Fig. 9, paragraphs 0046-0050, where in steps (104-107), the recording strategy is determined and writing to the medium is performed in step (104)), wherein the characteristics of the optical system includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device (Fig. 1, paragraph 0017, where the optical pickup includes a

laser (1) which sends light with a wavelength to the optical recording device (5), with an objective lens (4) which has a numerical aperture).

As to **claim 31**, *Toda* discloses limitations similar to those disclosed in claim 20 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 2005/0088940 A1 to *Toda et al.* in view of U.S. Patent Pub. No. 2003/0048709 A1 to *Van Wouenberg*.

As to **claim 10**, *Toda* is deficient in disclosing the optical recording method, wherein: the step of reading reads a recommended wavelength value from the optical recording medium; and the step of determining performs a determination based on the recommended wavelength value and the wavelength of a laser beam of the optical recording device used in recording.

However, *Van Wouenberg* discloses the optical recording method, wherein: the step of reading reads a recommended wavelength value from the optical recording medium; and the step of determining performs a determination based on the recommended wavelength value and the wavelength of a laser beam of the optical recording device used in recording (Paragraph 0006, where the Phase Encoded Part

(PEP) is read on the disc which has the information on which wavelength of light needs to be used in order to read and write to the medium).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the optical recording method that reads a recommended write strategy from an optical recording medium as taught by *Toda* by including reading a recommended wavelength value from the optical recording medium as taught by *Van Woundenberg*. The suggestion/motivation would have been in order to use the proper recording and reading wavelength based on the manufacturer's information on the disc (*Van Woundenberg*, paragraph 0006).

As to **claim 28**, *Toda* is deficient in disclosing limitations similar to those disclosed in claim 10 above. However, *Van Woundenberg* discloses limitations similar to those disclosed in claim 10 above. In addition, the same motivation is used as the rejection in claim 10.

Claims 11 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 2005/0088940 A1 to *Toda et al.* in view of U.S. Patent Pub. No. 2001/0014067 A1 to *Iwata et al.*

As to **claim 11**, *Toda* discloses the optical recording method, wherein: the step of writing performs writing by use of the calculated asymmetry value (Fig. 9, paragraphs 0046-0050, where writing to the medium is performed in step (104) based on the calculated asymmetry value in step (106)).

Toda is deficient in disclosing the determining step calculates an asymmetry value for use in recording based on the recommended asymmetry value and the

numerical aperture of the objective lens of the optical recording device used in recording.

However, *Iwata* discloses the determining step calculates an asymmetry value for use in recording based on the recommended asymmetry value and the numerical aperture of the objective lens of the optical recording device used in recording (Fig. 13 and 20, paragraph 0091, where the asymmetry values shown in Fig. 20 are the result of calculated asymmetry values in relation to different numerical apertures used in the apparatus shown in Fig. 13).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have modified the optical recording method that reads a recommended write strategy from an optical recording medium as taught by *Toda* by including calculating the asymmetry value based on the numerical aperture of the objective lens as taught by *Iwata*. The suggestion/motivation would have been in order to optimize the asymmetry value based on the numerical aperture of the objective lens (*Iwata*, paragraph 0091).

As to **claim 29**, *Toda* and *Iwata* disclose limitations similar to those in claim 11 above. In addition, *Toda* discloses the step of reading reads a recommended asymmetry value (Fig. 9, paragraph 0046 and 0049, where the recommended write strategy is read in step (102) and the recommended asymmetry value is calculated based on the write strategy in step (106)). In addition, the same motivation is used as the rejection in claim 11.

Allowable Subject Matter

Claims 5-9, 12, 17-19 and 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 3/25/2010 have been fully considered but they are not persuasive.

First Applicant argues, with respect to claims 1 and 20, on pages 16-17, lines 4-2, that *Toda* fails to disclose the characteristics of the optical system of the optical pickup includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device. Examiner disagrees as *Toda* does disclose the characteristics of the optical system of the optical pickup includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device (Fig. 1, paragraph 0017, where the optical pickup includes a laser (1) which sends light with a wavelength to the optical recording device (5), with an objective lens (4) which has a numerical aperture).

Second Applicant argues, with respect to claims 1 and 20, on pages 16-17, lines 4-2, that *Toda* fails to disclose determining a write strategy and asymmetry value to be used in the recording based on the recommended write strategy parameters, the recommended asymmetry value, and the characteristics of the optical system of the optical pickup, wherein the characteristics of the optical system of the optical pickup

includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical record device. Examiner disagrees as *Toda* discloses determining a write strategy and asymmetry value to be used in the recording based on the recommended write strategy parameters, the recommended asymmetry value, and the characteristics of the optical system of the optical pickup (Fig. 9, paragraphs 0018 and 0046-0051, where in step (102), the control data, which includes the recording condition data, which includes the recording power and the asymmetry data, is retrieved from the recording medium (5), which are the recommended write strategy and the recommended asymmetry value, and in steps (104-107), the asymmetry and write strategy are changed based on the characteristics of the optical system of the optical pickup until the optimum recording condition is achieved).

Third Applicant argues, on page 17, lines 3-11, that the rejection of claims 10 and 28 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2005/0088940 A1 to *Toda* in view of U.S. Patent Pub. No. 2003/0048709 A1 to *Van Woundenberg* does not establish a *prima facie* case of obviousness. Examiner disagrees for the following reasons:

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, it would have been obvious to a person of ordinary skilled in the art to have modified the optical recording method that reads a recommended write strategy from an optical recording medium as taught by *Toda* by including reading a recommended wavelength value from the optical recording medium as taught by *Van Woundenberg*. The suggestion/motivation would have been in order to use the proper recording and reading wavelength based on the manufacturer's information on the disc (Van Woundenberg, paragraph 0006).

Deleted:

Fourth Applicant argues, with respect to claims 10 and 28 on pages 17-18, lines 12-5, that since claims 10 and 28 depend on independent claims 1 and 20, respectively, they are patentable. Examiner disagrees for the reasons stated above.

Fifth Applicant argues, with respect to claims 11 and 29 on page 18, lines 6-12, that since claims 11 and 29 depend on independent claims 1 and 20, respectively, they are patentable. Examiner disagrees for the reasons stated above.

Sixth Applicant argues, with respect to claims 11 and 29 on page 18, lines 13-19, that *Iwata* fails to disclose calculating the asymmetry value based on the numerical aperture. Examiner disagrees as *Iwata* discloses calculating the asymmetry value based on the numerical aperture (Fig. 13 and 20, paragraph 0091, where the asymmetry values shown in Fig. 20 are the result of calculated asymmetry values in relation to different numerical apertures used in the apparatus shown in Fig. 13).

Seventh Applicant argues, with respect to claims 11 and 29 on pages 18-19, lines 20-8, that the combination of *Toda* and *Iwata* fail to render claims 11 and 29 unpatentable because the combination does not disclose every claimed element. Examiner disagrees for the reasons stated above.

Eighth Applicant argues, on page 19, lines 9-13, that the application is in condition for allowance. Examiner disagrees for the reasons stated above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Yodichkas whose telephone number is (571)

272-9773. The examiner can normally be reached on Monday-Thursday 8-5, alternating Fridays, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A.Y./
6/9/10

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627